

CLAIMS:

1. A method for synchronizing signals, comprising:

receiving, from a source, a first signal and a second signal by a receiving apparatus of a receiving system, the first and second signals to be displayed on a display apparatus of the receiving system, the first and second signals having been time-synchronized at the
5 source, the first signal having content of a first modality, the second signal having content of a second modality;

displaying on the display apparatus the first and second signals, said displayed first and second signals being accessible to a user; and

10 manually reducing, by the user, the time rate of displaying one of the first signal and the second signal, said manually reducing being directed to time-synchronizing said displaying of the first and second signals on the display apparatus.

2. The method of claim 1, wherein said manually reducing comprises:

15 manually directing a delay compensation circuit of the receiving apparatus to electronically reduce said time rate of displaying; and

electronically reducing, by the delay compensation circuit, said time rate.

3. The method of claim 1, wherein said manually reducing comprises introducing a time

20 delay gap in the displaying of said one of the first signal and the second signal.

4. The method of claim 1, wherein said manually reducing does not comprise introducing a time delay gap in the displaying of said one of the first signal and the second signal.

5. The method of claim 1, wherein said manually reducing comprises manually manipulating a control.

6. The method of claim 5, wherein said control is on the display apparatus.

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7. The method of claim 5, wherein said control is on a wireless device.

8. The method of claim 1, wherein the first modality differs from the second modality.

9. The method of claim 8, wherein the first modality is a video modality, and wherein the
10 second modality is an audio modality.

10. The method of claim 8, wherein the first modality is a video modality, and wherein the second modality is an text modality.

11. The method of claim 8, wherein the first modality is an audio modality, and wherein
15 the second modality is a text modality.

12. The method of claim 1, wherein said receiving the first signal and the second signal
comprises receiving the first signal and the second signal on separate channels.

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13. The method of claim 1, wherein said receiving the first signal and the second signal
comprises receiving the first signal and the second signal as not multiplexed with each
other.

14. The method of claim 1, wherein said receiving the first signal and the second signal
25 comprises receiving the first signal and the second signal as multiplexed but not time-
synchronized with each other.

15. A system for synchronizing signals, comprising:

receiving means for receiving, from a source, a first signal and a second signal by a receiving apparatus of a receiving system, the first and second signals to be displayed on a display apparatus of the receiving system, the first and second signals having been time-synchronized at the source, the first signal having content of a first modality, the second signal having content of a second modality;

display means for displaying on the display apparatus the first and second signals, said-displayed first and second signals being accessible to a user; and

manual reducing means for manually reducing, by the user, the time rate of displaying one of the first signal and the second signal, said manually reducing being directed to time-synchronizing said displaying of the first and second signals on the display apparatus.

16. The system of claim 15, wherein said manually reducing comprises:

directing means for manually directing a delay compensation circuit of the receiving apparatus to electronically reduce said time rate of displaying; and

electronic reducing means for electronically reducing, by the delay compensation circuit, said time rate.

17. The system of claim 15, wherein said manually reducing comprises introducing a time delay gap in the displaying of said one of the first signal and the second signal.

18. The system of claim 15, wherein said manually reducing does not comprise introducing a time delay gap in the displaying of said one of the first signal and the second signal.

19. The system of claim 15, wherein said manual reducing means comprises a control.

20. The system of claim 19, wherein said control is on the display apparatus.

5 21. The system of claim 19, wherein said control is on a wireless device.

22. The system of claim 15, wherein the first modality differs from the second modality.

23. The system of claim 22, wherein the first modality is a video modality, and wherein the
10 second modality is an audio modality.

24. The system of claim 22, wherein the first modality is a video modality, and wherein the
second modality is an text modality.

15 25. The system of claim 22, wherein the first modality is an audio modality, and wherein
the second modality is a text modality.

26. The system of claim 15, wherein said receiving means comprises means for receiving
the first signal and the second signal on separate channels.

20 27. The system of claim 15, wherein said receiving means comprises means for receiving
the first signal and the second signal as not multiplexed with each other.

28. The system of claim 15, wherein said receiving means comprises means for receiving
25 the first signal and the second signal as multiplexed but not time-synchronized with each
other.

29. A method for synchronizing signals, comprising:

receiving, from a source, a first signal and a second signal by a receiving apparatus of a receiving system, the first and second signals to be synchronously displayed on a display apparatus of the receiving system, the first and second signals having been time-synchronized at the source, the first signal having content of a first modality and a first plurality of time stamps originating from the source, the second signal having content of a second modality and a second plurality of time stamps originating from the source, the second plurality of time stamps being synchronized with the first plurality of time stamps;

determining at a plurality of times on a real-time clock C_R at the receiving system whether the first and second signals are time-synchronized relative to the clock C_R , said determining being based on analyzing the first and second plurality of time stamps in relation to the clock C_R ; and

reducing the time rate of displaying one of the first signal and the second signal when said determining determines that the first and second signals are not time-synchronized relative to the clock C_R such that the one is time advanced relative to the remaining other of the first signal and the second signal, said reducing being directed to time-synchronizing said displaying of the first and second signals on the display apparatus.

30. The method of claim 29,

wherein the first signal is in an uncompressed format as received by the receiving apparatus, wherein each timestamp of the first plurality of timestamps includes a time corresponding to a location in the first signal at which said timestamp of the first plurality of timestamps is positioned,

wherein the second signal is in an uncompressed format as received by the receiving apparatus, and wherein each timestamp of the second plurality of timestamps

includes a time corresponding to a location in the second signal at which said timestamp of the second plurality of timestamps is positioned.

31. The method of claim 29,

5 wherein the first signal is in a compressed format as received by the receiving apparatus, wherein each timestamp of the first plurality of timestamps includes a time corresponding to a location in a first uncompressed signal which was compressed at the source to form the first signal, wherein said timestamp of the first plurality of timestamps further includes an identification of said location in the first uncompressed signal,

10 wherein the second signal is in a compressed format as received by the receiving apparatus, wherein each timestamp of the second plurality of timestamps includes a corresponding to a location in a second uncompressed signal which was compressed at the source to form the second signal, and wherein said timestamp of the second plurality of timestamps further includes an identification of said location in the second uncompressed
15 signal.

32. The method of claim 29,

 wherein the first signal is in an uncompressed format as received by the receiving apparatus, wherein each timestamp of the first plurality of timestamps includes
20 corresponding to a location in the first signal at which said timestamp of the first plurality of timestamps is positioned,

 wherein the second signal is in a compressed format as received by the receiving apparatus, wherein each timestamp of the second plurality of timestamps includes a time corresponding to a location in an uncompressed signal which was compressed at the source

to form the second signal, and wherein said timestamp of the second plurality of timestamps further includes an identification of said location in the uncompressed signal.

33. The method of claim 29, wherein said reducing is effectuated by a delay compensation controller of the receiving apparatus.

34. The method of claim 29, wherein said reducing comprises introducing a time delay gap in the displaying of said one of the first signal and the second signal.

35. The method of claim 29, wherein said reducing does not comprise introducing a time delay gap in the displaying of said one of the first signal and the second signal.

36. The method of claim 29, wherein the first modality differs from the second modality.

37. The method of claim 36, wherein the first modality is a video modality, and wherein the second modality is an audio modality.

38. The method of claim 36, wherein the first modality is a video modality, and wherein the second modality is a text modality.

39. The method of claim 36, wherein the first modality is a text modality, and wherein the second modality is an audio modality.

40. The method of claim 29, wherein said receiving the first signal and the second signal comprises receiving the first signal and the second signal on separate channels.

41. The method of claim 29, wherein said receiving the first signal and the second signal comprises receiving the first signal and the second signal as not multiplexed with each other.

5 42. The method of claim 29, wherein said receiving the first signal and the second signal comprises receiving the first signal and the second signal as multiplexed but not time-synchronized with each other.

43. A system for synchronizing signals, comprising:

10 receiving means for receiving, from a source, a first signal and a second signal by a receiving apparatus of a receiving system, the first and second signals to be synchronously displayed on a display apparatus of the receiving system, the first and second signals having been time-synchronized at the source, the first signal having content of a first modality and a first plurality of timestamps originating from the source, the second signal
15 having content of a second modality and a second plurality of timestamps originating from the source, the second plurality of time stamps being synchronized with the first plurality of time stamps;

determining means for determining at a plurality of times on a real-time clock C_R at the receiving system whether the first and second signals are time-synchronized relative to the clock C_R , said determining being based on analyzing the first and second plurality of
20 timestamps in relation to the clock C_R ; and

reducing means for reducing the time rate of displaying one of the first signal and the second signal when said determining determines that the first and second signals are not time-synchronized relative to the clock C_R such that the one is time advanced relative
25 to the remaining other of the first signal and the second signal, said reducing being directed

to time-synchronizing said displaying of the first and second signals on the display apparatus.

44. The system of claim 43,

5 wherein the first signal is in an uncompressed format as received by the receiving apparatus, wherein each timestamp of the first plurality of timestamps includes a time corresponding to a location in the first signal at which said timestamp of the first plurality of timestamps is positioned,

10 wherein the second signal is in an uncompressed format as received by the receiving apparatus, and wherein each timestamp of the second plurality of timestamps includes a time corresponding to a location in the second signal at which said timestamp of the second plurality of timestamps is positioned.

45. The system of claim 43,

15 wherein the first signal is in an uncompressed format as received by the receiving apparatus, wherein each timestamp of the first plurality of timestamps includes a time corresponding to a location in a first uncompressed signal which was compressed at the source to form the first signal, wherein said timestamp of the first plurality of timestamps further includes an identification of said location in the first uncompressed signal,

20 wherein the second signal is in an uncompressed format as received by the receiving apparatus, wherein each timestamp of the second plurality of timestamps includes a time corresponding to a location in a second uncompressed signal which was compressed at the source to form the second signal, and wherein said timestamp of the second plurality of timestamps further includes an identification of said location in the
25 second uncompressed signal.

46. The system of claim 43,

wherein the first signal is in an uncompressed format as received by the receiving apparatus, wherein each timestamp of the first plurality of timestamps includes a time
5 corresponding to a location in the first signal at which said timestamp of the first plurality of timestamps is positioned,

wherein the second signal is in an uncompressed format as received by the receiving apparatus, wherein each timestamp of the second plurality of timestamps includes a time corresponding to a location in a second uncompressed signal which was
10 compressed at the source to form the second signal, and wherein said timestamp of the second plurality of timestamps further includes an identification of said location in the second uncompressed signal.

47. The system of claim 43, wherein said reducing is effectuated by a delay compensation
15 controller of the receiving apparatus.

48. The system of claim 43, wherein said reducing comprises introducing a time delay gap in the displaying of said one of the first signal and the second signal.

20 49. The system of claim 43, wherein said reducing does not comprise introducing a time delay gap in the displaying of said one of the first signal and the second signal.

50. The system of claim 43, wherein the first modality differs from the second modality.

25 51. The system of claim 50, wherein the first modality is a video modality, and wherein the second modality is an audio modality.

52. The system of claim 50, wherein the first modality is a video modality, and wherein the second modality is an text modality.

5 53. The system of claim 50, wherein the first modality is a text modality, and wherein the second modality is an audio modality.

54. The system of claim 43, wherein said receiving means comprises means for receiving the first signal and the second signal on separate channels.

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55. The system of claim 43, wherein said receiving means comprises means for receiving the first signal and the second signal as not multiplexed with each other.

56. The system of claim 43, wherein said receiving means comprises means for receiving the first signal and the second signal as multiplexed but not time-synchronized with each other.